

Prevention

THE EFFECT OF NIGHTTIME BLOOD PRESSURE VARIABILITY ON LEFT VENTRICULAR HYPERTROPHY AND CAROTID INTIMA MEDIA THICKNESS IN PATIENTS WITH NSTEMI

Poster Contributions

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Background: Although mean nighttime (sleep) blood pressure (BP) and daytime BP variability are important risk factors for target organ damage, the effect of nighttime BP variability was not fully elucidated in patients with non ST-segment elevation acute coronary syndromes (NSTE-ACS).

Methods: In 25 NSTE-ACS patients undergoing coronary intervention (66 ± 6 years, 19 male), we assessed the relationships of nighttime BP variability to left ventricular (LV) hypertrophy, as determined by LV mass index, and carotid intima media thickness (IMT), in comparison with other BP patterns (mean nighttime BP and daytime BP variability). Each BP pattern was analyzed by ambulatory 24-hour blood pressure monitoring (ABPM) data, and BP variability was defined as standard deviation of mean systolic BP.

Results: Higher nighttime BP variability was associated with both increased LV mass index ($r=0.49$, $p<0.05$) and IMT ($r=0.32$, $p<0.05$) in the simple linear regression analysis (Figure). On the other hand, neither mean nighttime BP nor daytime BP variability was associated with these parameters.

Conclusion: Greater nighttime BP variability was associated with increased LV hypertrophy and IMT, as compared with mean nighttime BP and daytime BP variability. Nighttime BP variability should be considered for the BP treatment of patients with NSTE-ACS.

Relationships of nighttime BP variability to carotid intima media thickness and LV mass index

